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This document reports data on science graduate students currently enrolled, and the number and probable rate of induction of those in draft liable classifications. With the assistance of several societies in the various scientific disciplines, 1,237 doctorate-granting science departments were queried. Reported was information on the draft status of over 30,000 graduate students. Indicated were that (1) under present draft regulations as many as 38 per cent of the first and second year male, full time science graduate students, or up to 46 per cent of such U.S. students are potentially liable for the draft; (2) unless present draft regulations are modified, the number of American males now engaged in advanced scientific training in the nation's graduate schools will be substantially reduced during coming months; (3) the loss of substantial numbers of current first and second year graduate students will result in a related decrease in the enrollment in advanced graduate classes for several years to come; and (4) the nation's supply of newly trained Ph.D.'s in the sciences will be seriously curtailed in the early 1970's. (RS)

ED029794

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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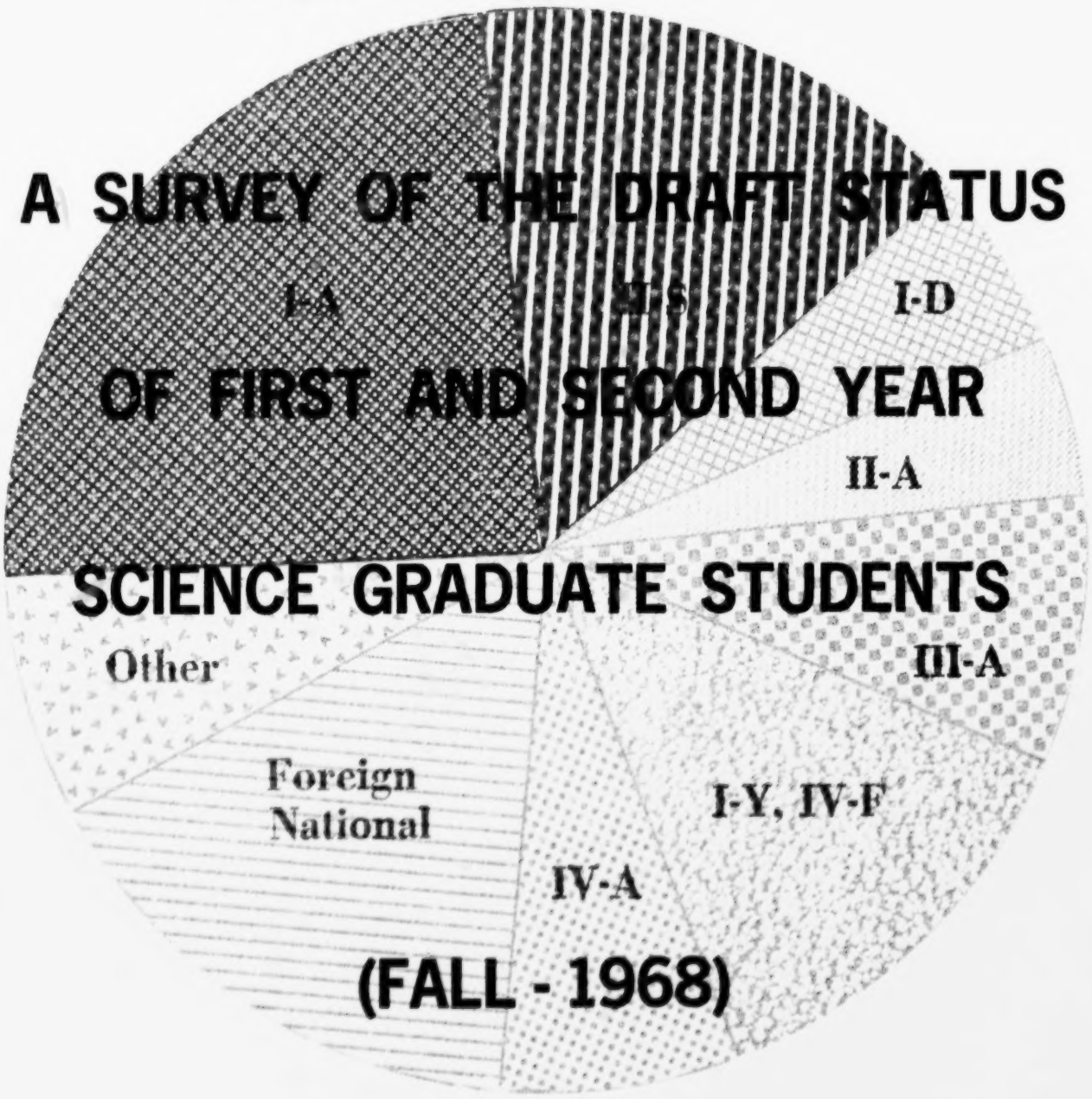
# A SURVEY OF THE DRAFT STATUS OF FIRST AND SECOND YEAR SCIENCE GRADUATE STUDENTS (FALL - 1968)




Prepared by
SCIENTIFIC MANPOWER COMMISSION

SE 006 764

Scientific Societies Participating in this Survey

American Chemical Society
American Geological Institute
American Institute of Physics
American Institute of Biological Sciences
American Psychological Association
Conference Board of the Mathematical Sciences
Federation of American Societies for Experimental Biology
Soil Conservation Society of America
American Society of Agronomy
American Society of Range Management
American Society of Animal Sciences
American Dairy Science Association
American Society of Agricultural Engineers

The Scientific Manpower Commission and its constituent scientific societies acknowledge with grateful thanks the extensive effort required of university science departments to provide the information requested for this survey.

The Commission also wishes to thank the members and staffs of the scientific societies participating in this survey for the many hours of extra time devoted to acquiring, reducing and assembling the data for this report.

Robert E. Henze
President

Betty M. Vetter
Executive Director

Scientific Manpower Commission
2101 Constitution Avenue, N.W.
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TABLE OF CONTENTS


Summary and Conclusions . . . . . 1

Purpose and Scope of the Survey . . . . . 3

Findings of the Survey: Reports from 1,237 Ph. D. Science Departments, Fall 1968 . . . . . 4

Draft Classification of Male First and Second Year Science Graduate Students . . . . . 4

Percent Distribution by Draft Classification of Male First and Second Year Full Time Science Graduate Students, by Discipline . . . . . 6

Draft Classification of Male First and Second Year Graduate Students Who Derive Their Principal Support from Teaching or Research . . . . . 8

Percent Distribution by Draft Classification of Male First and Second Year Full and Part Time Science Graduate Students Employed to Teach . . . . . 10

Percent Distribution by Draft Classification of Male First and Second Year Full and Part Time Science Graduate Students Employed in Research . . . . 12

Full Time Enrollment of First and Second Year Graduate Students by Sex and Year . . . . . 14

Discussion of the Survey . . . . . 16

Fall Enrollment, 1968 . . . . . 16

Teaching and Research Fellows and Assistants . . . . 18

Size and Potential Effect of Draft Calls . . . . . 19

Appendix A: Survey Data . . . . . 23

Appendix B: Definitions and Coverage . . . . . 26

Appendix C: Draft Classification Definitions . . . . . 27

Order of Consideration of Classes . . . . . 28

Order of Call in Class I-A . . . . . 28

PERCENT OF DRAFT LIABLE MEN AMONG 20,047 MALE FULL TIME SCIENCE GRADUATE STUDENTS, 7,365 FULL AND PART TIME STUDENTS WHO TEACH, AND 6,247 FULL AND PART TIME STUDENTS EMPLOYED IN RESEARCH IN 1,237 PH.D. GRANTING SCIENCE DEPARTMENTS, FALL 1968

Figure 1. ALL STUDENTS

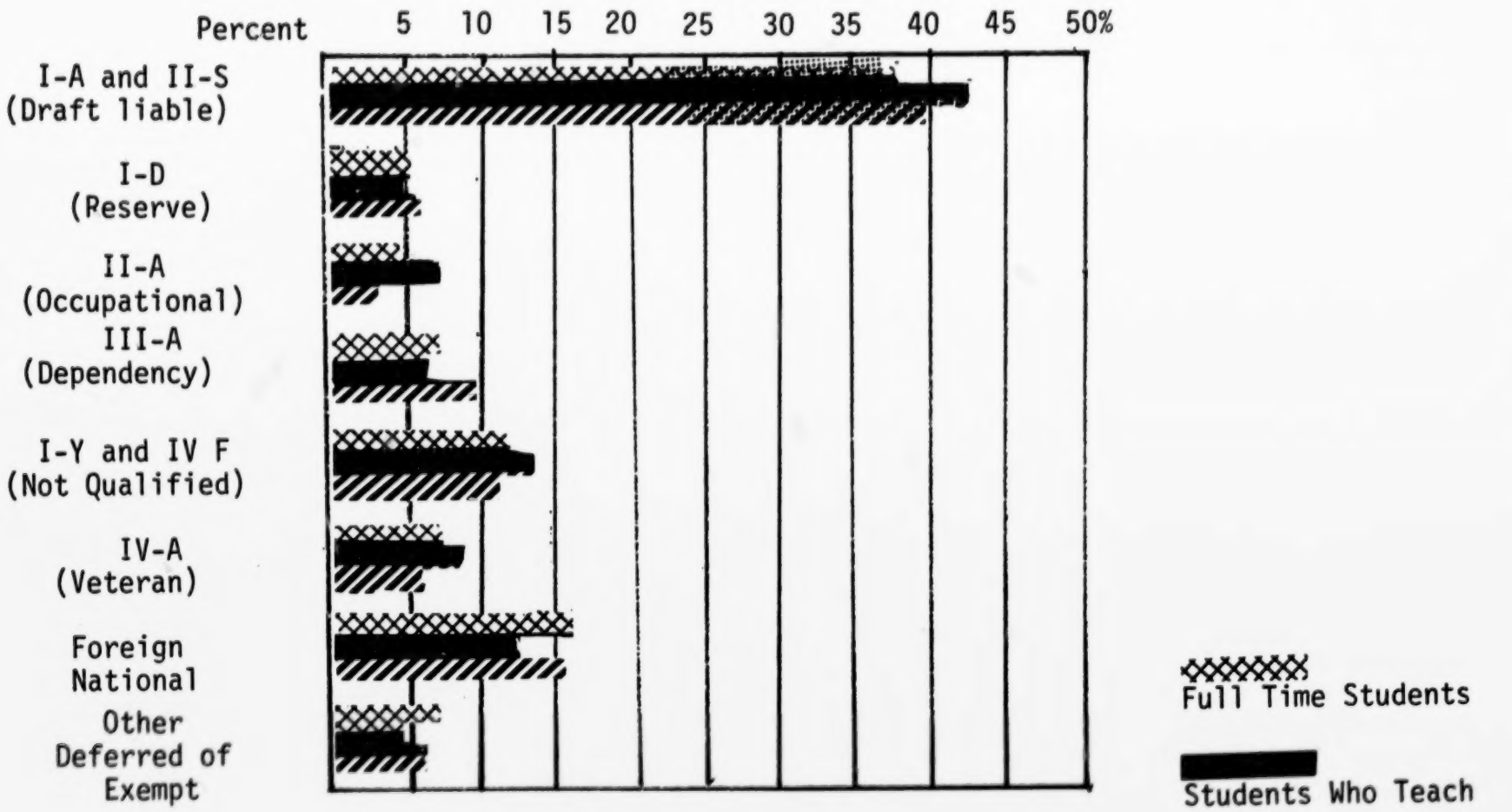
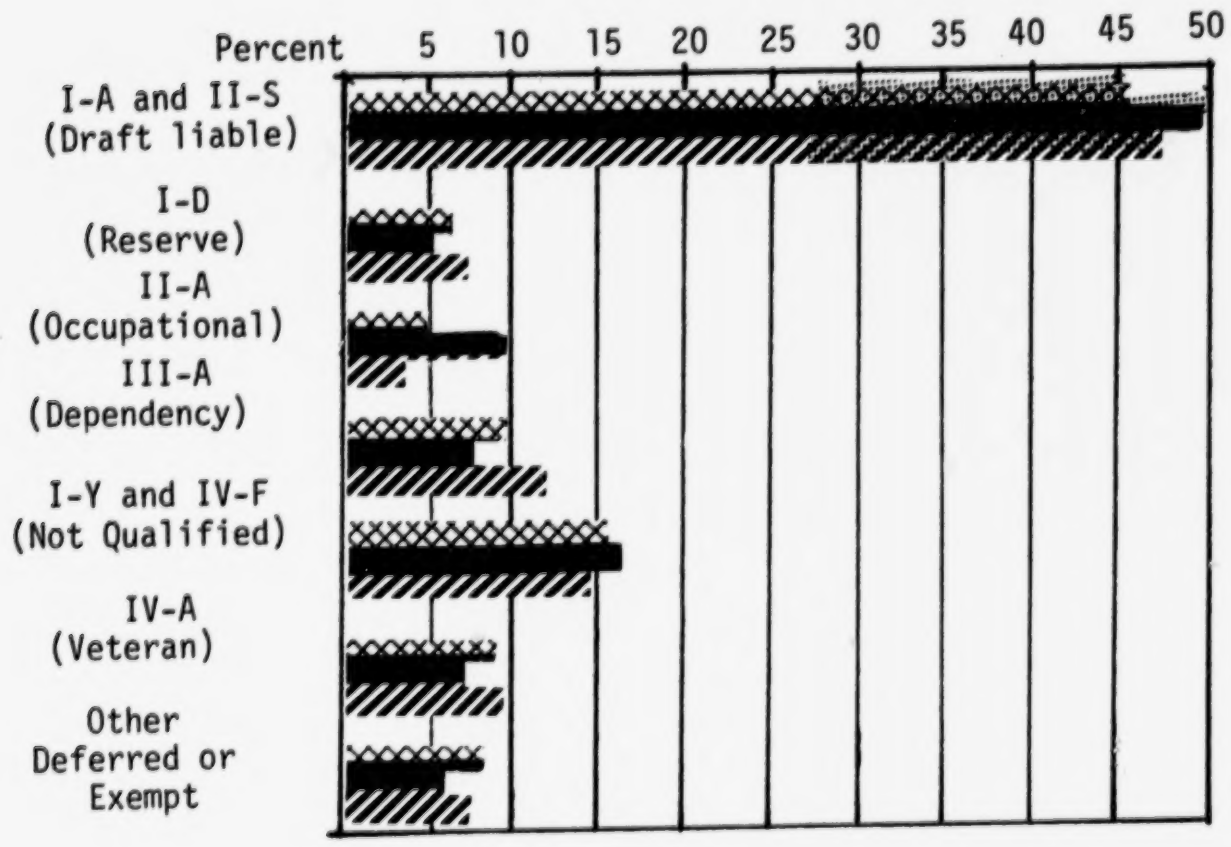



Figure 2. U.S. STUDENTS



## SUMMARY AND CONCLUSIONS

• Data furnished by 1,237 science departments in Ph.D. granting institutions throughout the United States indicate that under present draft regulations as many as 38% of first and second year male, full time, science graduate students, or up to 46% of such U. S. students, are potentially liable to induction in the months ahead.

• Among male science graduate students (either full or part time) employed to teach, 43% of all first and second year students, or 50% of such U. S. students, are potentially liable to induction in the months ahead.

• Among male science graduate students (either full or part time) employed to conduct research, 40% of all first and second year students, or 47% of such U. S. students, are potentially liable to induction in the months ahead.

• The present order of drafting oldest men first places current first and second year graduate students in top priority to fill draft calls which are expected to stay at high levels through the coming summer.

• Unless present draft regulations are modified, the number of U. S. males now engaged in advanced scientific training in the nation's graduate schools will be substantially reduced during the coming months. Adequate numbers of graduate teaching fellows to assist undergraduate students may not be available in many universities, and research projects now under way may be delayed or curtailed by the loss of graduate research assistants.

• The loss of substantial numbers of current first and second year graduate students will result in a related decrease in the enrollment in advanced graduate classes for several years to come.

• The nation's supply of newly trained Ph.D.'s in the sciences will be seriously curtailed in the early 1970's.

The Scientific Manpower Commission hopes that these data will be helpful to graduate science departments in their planning for the remainder of this year and for the years ahead when advanced graduate classes will reflect the deficits from the present first and second year classes if no change is made in draft regulations.

The Commission clearly recognizes that the nation's need for trained manpower and for scholarship at the highest level is not limited to the sciences, but a lack of resources and time prevented extension of this survey to graduate departments outside the sciences.

The Commission is especially hopeful that the Security Council, the several Cabinet Departments and other Executive Offices charged with maintaining surveillance over the nation's manpower and educational needs, and the Congress will find this information useful in their continuing assessment of the professional manpower requirements of the nation.

DRAFT CLASSIFICATION OF MALE FIRST AND SECOND YEAR FULL TIME GRADUATE STUDENTS ENROLLED IN 1,237 PH.D. GRANTING SCIENCE DEPARTMENTS, FALL 1968

Figure 3. ALL STUDENTS

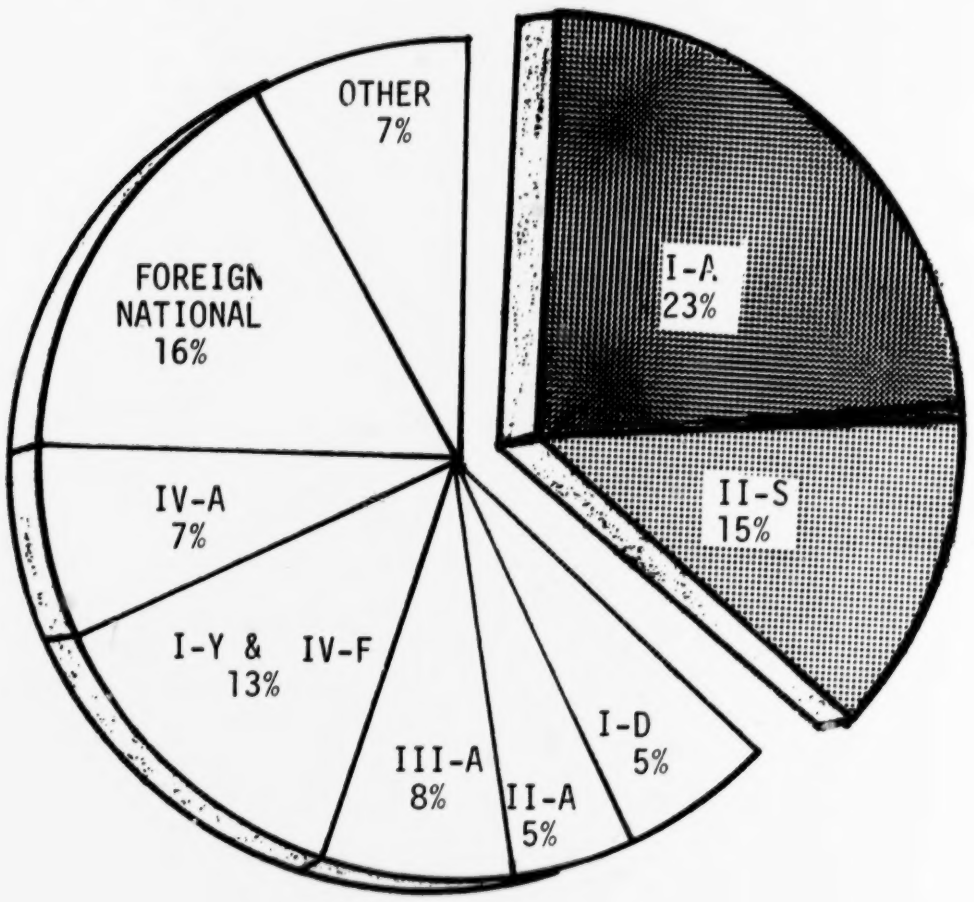
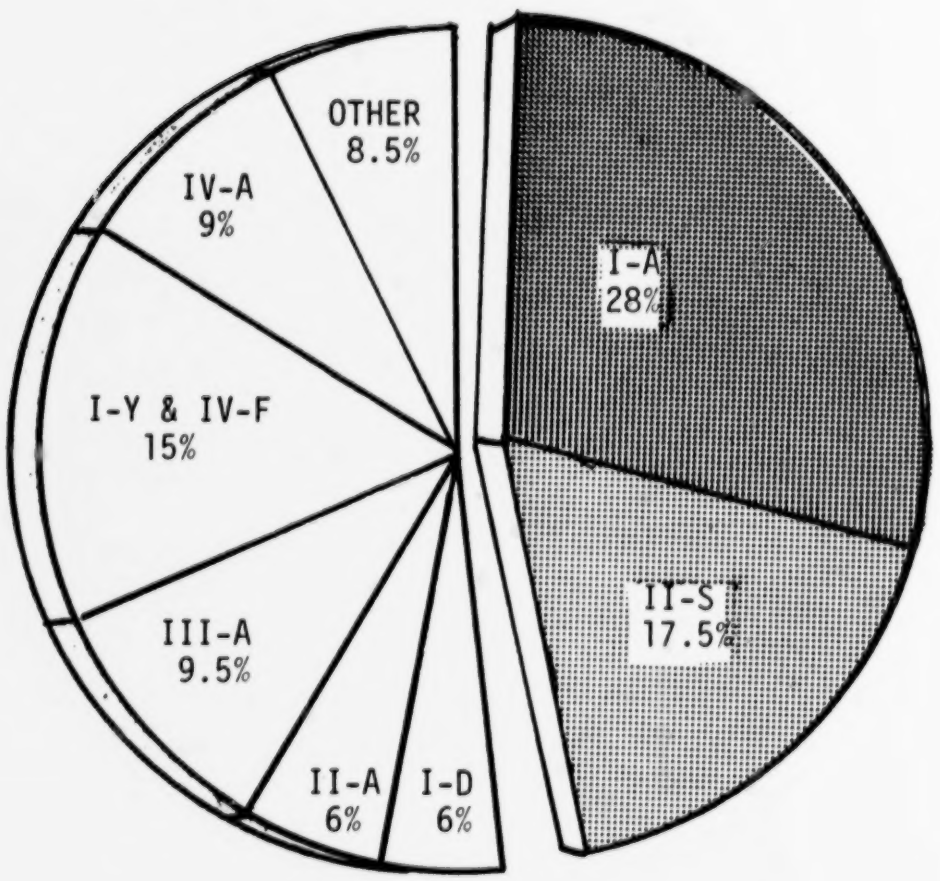



Figure 4. U.S. STUDENTS



## PURPOSE AND SCOPE OF THE SURVEY

Current draft policies limiting deferment for graduate study to students in medical fields or to those completing programs begun before the fall of 1967 are of serious and continuing concern to institutions bearing responsibility for graduate education, and to others interested in the manpower resources of the nation. The removal of graduate study as a basis for deferment, coupled with an "oldest first" induction priority, has focused draft liability on current first and second year graduate students and on those June baccalaureates who might elect to undertake advanced study in the fall of 1969.

Any meaningful prediction of the potential impact of these draft policies on graduate education in the months ahead requires a knowledge of the draft status of graduate students currently enrolled, and the number and probable rate of call of those in draft liable classifications. In the hope of providing timely information on this subject, the Scientific Manpower Commission, in mid-fall of 1968, undertook a survey of graduate science departments in the United States to determine the draft classification of first and second year science graduate students then enrolled.

With the cooperation and assistance of the several scientific societies concerned with chemistry, physics, geosciences, biology, biochemistry, biomedical sciences, agricultural sciences, mathematics, and psychology, 2,290 Ph.D. granting science departments were queried. Fifty four percent of these departments provided usable information. They reported on the draft status of 20,047 male full time, first and second year graduate students. They included additional part time students in their reports of the draft status of 7,365 students who teach and 6,373 who assist in research.

Although not representing a complete response, the Commission believes that the results obtained in this survey are substantial enough to provide those concerned with scientific manpower an insight into the potential impact of current draft policy on graduate education in the sciences and on the future supply of highly trained personnel in disciplines crucial to the future well-being of the nation.

The Scientific Manpower Commission clearly recognizes that the nation's need for trained manpower and scholarship at the highest levels is not limited to the sciences. It regrets that a lack of resources and time prevented extension of this survey to graduate departments beyond the sciences.

TABLE I. DRAFT CLASSIFICATION OF FIRST AND SECOND YEAR MALE GRADUATE STUDENTS ENROLLED IN 1,237 REPORTING PH.D. GRANTING SCIENCE DEPARTMENTS, FALL 1968

| | No. of Departments Surveyed | No. of Departments Responding | Percent of Departments Responding |
|---|---|---|---|
| | 2,290 | 1,237 | 54.0 |

| Selective Service Classification[1] | FIRST AND SECOND YEAR MALE GRADUATE STUDENTS | | | | | |
|---|---|---|---|---|---|---|
| | All Full Time First and Second Year Male Graduate Students | | | Full Time First and Second Year Male Graduate Students Excluding Foreign Nationals | | |
| | Number | Percent | | Number | Percent | |
| I-A (Draftable) | 4,725 | 23.3 | 38.0 | 4,725 | 28.1 | 45.6 |
| II-S (Student) | 2,951 | 14.7 | | 2,951 | 17.5 | |
| I-D (Reserve) | 1,074 | 5.3 | | 1,074 | 6.4 | |
| II-A (Occupation) | 962 | 4.8 | | 962 | 5.7 | |
| III-A (Fatherhood, Hardship) | 1,592 | 7.9 | | 1,592 | 9.5 | |
| I-Y, IV-F (Not qualified) | 2,585 | 12.9 | | 2,585 | 15.4 | |
| IV-A (Veteran) | 1,465 | 7.3 | | 1,465 | 8.8 | |
| Foreign National | 3,258 | 16.2 | | ----- | ----- | |
| Other[2] | 1,435 | 7.2 | | 1,435 | 8.5 | |
| TOTAL NUMBER | 20,047 | | | 16,789 | | |

1. See Appendix C for detailed definitions.

2. Includes I-A over age 26, I-C, II-C, IV-C and V-A. All are deferred or exempt classifications or, in the case of I-A over 26, in a low priority within the order of call. See Appendix C for Order of Call and Order of consideration by classes.

Table I and Figure 3 show the draft classification of 20,047 male full time science graduate students reported by 1,237 Ph.D. granting science departments. Of this total, 23% were classified I-A at the time of reporting - between October 23 and November 15. When the foreign students are removed from the total number, 28% of the U. S. men were classified I-A.

In addition, 15% of all reported males, or 18% of the U. S. males were classified II-S, a student deferment classification not available this year to first or second year graduate students. It is assumed that these students had not yet been reclassified from last year's student classification at the time of reporting.

In general, there are two principal classifications into which this II-S group may move, I-A or I-Y, although a few may be granted occupational deferment for research activities. Occupational deferment for teaching is not available to full time students. If the students who are now classified in II-S had been eligible for a lower classification, they would not now be in II-S, since Selective Service law requires that a man be placed in the lowest class for which he is eligible[1]. Therefore, in accordance with current Selective Service regulations, it is expected that most students still classified II-S at the time of this survey will move into I-A classification.

As soon as this occurs, 38% of the graduate students reported in Table I will be liable for induction in the months ahead.

Excluding foreign nationals from the total reported, 46% of the U. S. students reported in Table I are in these draft liable categories.

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1 See Appendix C, p.28 for order of liability among classifications.

TABLE II. PERCENT DISTRIBUTION BY DRAFT CLASSIFICATION OF FIRST AND SECOND YEAR MALE FULL TIME GRADUATE STUDENTS ENROLLED IN 1237 PH.D. GRANTING DEPARTMENTS REPORTING, BY SCIENTIFIC DISCIPLINE, FALL 1968

| SCIENTIFIC DISCIPLINE | MATHEMATICAL SCIENCES | | PHYSICS & ASTRONOMY | | GEOSCIENCES | | CHEMISTRY | | BIOCHEMISTRY | | BIOLOGICAL SCIENCES | | BIOMEDICAL[1] SCIENCES | | PSYCHOLOGY | | AGRICULTURAL SCIENCES | | ALL DISCIPLINES COMBINED | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Depts. Surveyed | 196 | | 192 | | 130 | | 174 | | 114 | | 705 | | 359 | | 201 | | 219 | | 2,290 | |
| No. of Depts. Reporting | 117 | | 108 | | 85 | | 122 | | 70 | | 306 | | 206 | | 101 | | 122 | | 1,237 | |
| Percent Reporting | 60.0 | | 56.4 | | 65.4 | | 70.1 | | 62.0 | | 42.0 | | 57.4 | | 50.2 | | 56.0 | | 54.0 | |
| Number of Students Whose Draft Classification is Reported | | | | | | | | | | | | | | | | | | | | |
| First Year | 1,328 | | 1,497 | | 596 | | 2,029 | | 351 | | 1,535 | | 591 | | 1,392 | | 988 | | 10,407 | |
| Second Year | 1.152 | | 1,138 | | 670 | | 1,773 | | 350 | | 1,485 | | 636 | | 1,252 | | 1,184 | | 9,640 | |
| TOTAL | 2,480 | | 2,635 | | 1,366 | | 3,802 | | 701 | | 3,020 | | 1,227 | | 2,644 | | 2,172 | | 20,047 | |
| Year | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| I-A (Draftable) | 27 | 23 | 32 | 25 | 20 | 22 | 30 | 25 | 23 | 17 | 24 | 19 | 21 | 20 | 28 | 23 | 14 | 11 | 27.0 | 21.0 |
| II-S (Student) | 7 | 19 | 7 | 17 | 21 | 8 | 9 | 19 | 15 | 32 | 11 | 22 | 20 | 24 | 11 | 24 | 9 | 14 | 9.8 | 20.0 |
| I-D (Reserve) | 6 | 4 | 3 | 3 | 5.5 | 6 | 6 | 4.5 | 6 | 3 | 7 | 4 | 4 | 5 | 8 | 5 | 8 | 7 | 5.9 | 4.6 |
| II-A (Occupation) | 5 | 5 | 14 | 9 | 2 | 2 | 7 | 6.5 | 2 | 5 | 3 | 2 | 3 | 3 | 3 | 3 | 1 | 1 | 5.3 | 4.2 |
| III-A (Fatherhood, Hardship) | 7 | 8 | 3 | 5 | 7 | 5 | 6 | 10 | 5 | 10 | 9 | 11 | 9 | 12 | 8 | 8 | 9 | 12 | 6.7 | 9.2 |
| I-Y, IV-F (Not qualified) | 14 | 12 | 13 | 12 | 8 | 15 | 13 | 10 | 15 | 9 | 16 | 11 | 14 | 11 | 21 | 15 | 10 | 6 | 14.6 | 10.9 |
| IV-A (Veteran) | 6 | 4 | 4 | 4 | 12.5 | 9 | 5 | 3 | 6 | 3 | 9 | 9 | 8 | 9 | 10.5 | 13 | 11 | 9 | 7.3 | 7.2 |
| Foreign National | 20 | 16 | 16 | 18 | 17 | 24 | 17.5 | 14 | 19 | 13 | 14 | 14 | 13 | 10 | 4 | 4 | 32 | 34 | 16.6 | 14.9 |
| Other[2] | 7 | 8 | 7 | 7 | 8 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 6 | 5 | 7.3 | 6.9 |

(Totals may not add to 100% because of rounding)

1. See TABLE VI for fields included.
2. Includes I-A over age 26, I-C, II-C, IV-C and V-A. See Appendix C for detailed definitions.

Table I summarized the draft status of 20,047 full time science graduate students as reported by 1,237 Ph.D. granting science departments. Table II shows the draft status of these students by discipline. There is considerable variation among disciplines and some variation between those in their first and second year of graduate study, but the variations among disciplines in percentages of students in each draft classification decrease when the foreign students are subtracted from the totals, and the percentages recalculated for U. S. males alone.

The proportion of male first and second year foreign students in reporting departments ranges from 4% in psychology to 33% in the agricultural sciences. When the foreign students are removed from the totals, the percentages of U. S. students in each classification are as shown in Table I and Figure 4.

Students in I-A in the first year class including the foreign students ranged from 14% in the agricultural sciences (with the highest concentration of foreign nationals) to around 30% each in chemistry and physics. In the second year class, the agricultural sciences with the highest percentage of foreign nationals again had the lowest percentage classified I-A (11%), while chemistry and physics, each with 25%, were highest.

Students classified II-S made up between 7 and 21 percent of the first year class, and between 8 and 32 percent of the second year class. For all disciplines combined, 10% of the first year and 20% of the second year students were classified II-S. The number of students still classified in II-S is uniformly higher among second year than among first year graduate students. Students who completed a degree in June including the baccalaureate were subject to immediate reclassification; while those who continued study through the summer without having received a degree were eligible to retain their II-S classification until the fall term began.

The number of students classified II-A ranged from 1% in the agricultural sciences to 14% of the first year physics majors, with an average 5% of the first year and 4% of the second year students having occupational deferment.

Many departments reported that occupational deferment was requested for a number of full time students who were also employed by their universities in research. (Local Board Memorandum 96, April 25, 1968, states that occupational deferment shall not be considered for full time students who teach.)

The "other" classification includes students in I-A who are over 26, students on active duty but enrolled in school; and other deferred or exempt classifications. This combined group represents a consistent 6 to 8 percent of both the first and second year class.[1]

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1 See Appendix A, p.23 for numerical data from which this table is derived.

TABLE III. DRAFT CLASSIFICATION OF FIRST AND SECOND YEAR MALE FULL AND PART TIME GRADUATE STUDENTS REPORTED BY 1237 PH.D. GRANTING DEPARTMENTS IN SCIENCE WHO DERIVE THEIR PRINCIPAL SUPPORT FROM TEACHING OR FROM RESEARCH, FALL 1968

| No. of Departments Surveyed | No. of Departments Responding | Percent of Departments Responding |
|---|---|---|
| 2,290 | 1,237 | 54.0 |

FIRST AND SECOND YEAR FULL AND PART TIME MALE GRADUATE STUDENTS

| SELECTIVE SERVICE CLASSIFICATION [1] | STUDENTS WHO DERIVE THEIR PRINCIPAL SUPPORT FROM TEACHING | | | | STUDENTS WHO DERIVE THEIR PRINCIPAL SUPPORT FROM RESEARCH | | | |
|---|---|---|---|---|---|---|---|---|
| | ALL STUDENTS | | U.S. STUDENTS | | ALL STUDENTS | | U.S. STUDENTS | |
| | Number | Percent | Percent | | Number | Percent | Percent | |
| I-A (Draftable) | 2,230 | 30.6 | 35.0 | | 1,431 | 23.0 | 27.0 | |
| II-S (Student) | 931 | 12.6 | 14.6 | 43.2 / 49.6 | 1,045 | 16.8 | 19.9 | 39.8 / 46.9 |
| I-D (Reserve) | 339 | 4.6 | 5.3 | | 359 | 5.8 | 6.8 | |
| II-A (Occupational) | 571 | 7.7 | 9.0 | | 198 | 3.2 | 3.7 | |
| III-A (Fatherhood, Hardship) | 483 | 6.5 | 7.6 | | 632 | 10.0 | 11.9 | |
| I-Y, IV-F (Not qualified) | 1,003 | 13.7 | 15.8 | | 741 | 11.9 | 14.0 | |
| IV-A (Veteran) | 450 | 6.1 | 7.1 | | 514 | 8.3 | 9.7 | |
| Foreign National | 992 | 13.4 | ---- | | 957 | 15.3 | ---- | |
| Other [2] | 366 | 4.8 | 5.7 | | 370 | 5.9 | 7.0 | |
| TOTAL NUMBER | 7,365 | | 6,373 | | 6,247 | | 5,290 | |

1 See Appendix C p.27 for detailed definitions

2, Includes I-A over age 26, I-C, II-C, IV-C and V-A. See Appendix C, p.27 for definitions.

Table III shows that among the 7,365 male full and part-time graduate students reported who are serving in a teaching capacity, nearly 31% are classified I-A, with an additional 13% classified II-S. Thus, 43% of these teachers are potentially liable to induction.

When foreign students employed as teachers are removed from the total number, 35% of the U. S. males are in I-A and 15% are in II-S for a total potential draft liability of 50%.

Among the first and second year research fellows and assistants who are full or part-time students, 23% are in I-A, with an additional 17% in II-S for a maximum draft liability of 40%.

Among the male U. S. researchers, 27% are in I-A and 20% are in II-S, for a maximum liability of 47%.

The authority of State Directors and the National Director of Selective Service to postpone induction to the end of the quarter or semester in which a notice is issued (State Director Advice No. 763 issued October 24, 1968) should enable most of these young men to complete their current terms. Such postponements will, however, require the issuance of many more induction orders each month than the number needed to fill monthly draft calls; and will result in the induction of large numbers of graduate students at the end of the first quarter, semester or trimester; at the end of the second quarter; and at the end of the school year in June.

Although in terms of this survey, department chairmen were asked to report students only once, by principal source of support, it should be noted that many graduate students in the sciences are required to teach with or without pay, as a part of their graduate training. The number of first and second year full and part-time graduate students who are teaching in these 1,237 departments is therefore higher than the 7,365 reported here.

TABLE IV. PERCENT DISTRIBUTION BY DRAFT CLASSIFICATION OF FIRST AND SECOND YEAR MALE FULL AND PART TIME SCIENCE GRADUATE STUDENTS WHOSE PRINCIPAL SUPPORT IS DERIVED FROM TEACHING AS REPORTED BY 1237 PH.D. GRANTING SCIENCE DEPARTMENTS BY DISCIPLINE, FALL 1968

| SCIENTIFIC DISCIPLINE | MATHEMATICAL SCIENCES | | PHYSICS & ASTRONOMY | | GEOSCIENCES | | CHEMISTRY | | BIOCHEMISTRY | | BIOLOGICAL SCIENCES | | BIOMEDICAL SCIENCES [1] | | PSYCHOLOGY | | AGRICULTURAL SCIENCES [1] | | ALL DISCIPLINES COMBINED | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Depts. Surveyed | 196 | | 192 | | 130 | | 174 | | 114 | | 705 | | 359 | | 201 | | 219 | | 2,290 | |
| No. of Depts. Reporting | 117 | | 108 | | 85 | | 122 | | 70 | | 306 | | 206 | | 101 | | 122 | | 1,237 | |
| Percent Reporting | 60.0 | | 56.4 | | 65.4 | | 70.1 | | 62.0 | | 42.0 | | 57.4 | | 50.2 | | 56.0 | | 54.0 | |
| Number of Students Whose Draft Classification is Reported | | | | | | | | | | | | | | | | | | | | |
| First Year | 595 | | 781 | | 211 | | 1.455 | | 62 | | 439 | | 126 | | 287 | | 59 | | 4,015 | |
| Second Year | 578 | | 592 | | 227 | | 892 | | 66 | | 442 | | 165 | | 297 | | 91 | | 3,350 | |
| TOTAL | 1,173 | | 1,373 | | 438 | | 2,347 | | 128 | | 881 | | 291 | | 584 | | 150 | | 7,365 | |
| Year | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| I-A (Draftable) | 33 | 25 | 34 | 31 | 30 | 32 | 35 | 31 | 32 | 17 | 31 | 23 | 24 | 22 | 28 | 30 | 13.5 | 17.5 | 32.6 | 27.6 |
| II-S (Student) | 7 | 15 | 8 | 13 | 6 | 19 | 9 | 16 | 14.5 | 24 | 12 | 20 | 18 | 24 | 8 | 19.5 | 14 | 12 | 9.2 | 16.7 |
| I-D (Reserve) | 6 | 3 | 3 | 2 | 5 | 4 | 5 | 4 | 3 | 4.5 | 5 | 5 | 5.5 | 4 | 7 | 7 | 13.5 | 12 | 5.1 | 4.1 |
| II-A (Occupation) | 7 | 8 | 12 | 11 | 3 | 1 | 9 | 12 | 0 | 9 | 5 | 4 | 5.5 | 4 | 4 | 3 | 5 | 1 | 7.7 | 7.7 |
| III-A (Fatherhood Hardship) | 4 | 8 | 3 | 4 | 7 | 8 | 5 | 7 | 6.5 | 6 | 8 | 12 | 5 | 12 | 7 | 7 | 17 | 16.5 | 5.3 | 8.0 |
| I-Y, IV-F (Not qualified) | 17 | 12 | 14 | 11 | 20 | 9 | 13 | 10 | 5 | 14 | 20 | 13 | 17 | 11.5 | 22 | 13 | 12 | 13 | 15.6 | 11.2 |
| IV-A (Veteran) | 5 | 6 | 4 | 4 | 8 | 14 | 4 | 3.5 | 8 | 8 | 7 | 10 | 8 | 9 | 12.5 | 10 | 10 | 13 | 5.5 | 6.8 |
| Foreign National | 15 | 17 | 17 | 18 | 19 | 8 | 15 | 13 | 24 | 11 | 8 | 7 | 16 | 9 | 4 | 5 | 12 | 11 | 14.3 | 12.4 |
| Other [2] | 5 | 5 | 4 | 5 | 3 | 4 | 5 | 4.5 | 6.5 | 8 | 5 | 6 | 2 | 4 | 7 | 7 | 3 | 3 | 4.8 | 5.1 |

(Totals may not add to 100% because of rounding)

1. See TABLE VI for Disciplines Included.
2. Includes I-A over age 26, I-C, II-C, IV-C and V-A. See Appendix C for detailed definitions.

Table IV shows the draft classification of 7,365 full and part time first and second year male graduate students employed to teach in the 1,237 reporting science departments. This number includes 992 foreign nationals and 6,373 U. S. males.[1]

Since these men perform a vital task in assisting with the education of undergraduate students (who are deferred by law), many science departments hoped that occupational deferment would be provided for part time graduate students assigned substantial teaching responsibilities. According to present regulations, full time graduate students may not be considered for occupational deferment because they are engaged in teaching part time. (Local Board Memo No. 96, April 26, 1968).

It appears that in spite of their important instructional activities, fewer than 8% of the graduate students reported as teaching have obtained occupational deferment, suggesting that most local or appeal boards have not considered the teaching activities of these students to be essential to the national health, safety or interest, or to community needs.

Among first year graduate students employed to teach, between zero and 12 percent in the various disciplines are deferred in II-A. Among those who have completed one but not two years of graduate study, occupational deferments range from 1 to 12 percent.

The percentage of teaching students in I-A averages 33% of the first year and 28% of the second year men. When the teaching students still classified in II-S are added, 42% of the male teachers in their first graduate year and 44% in their second year appear subject to induction in the coming months. When the foreign nationals who teach are subtracted from the total number, 48% of the first and 50% of the second year U.S. male graduate students who are employed as teachers are liable to induction.

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1 Numerical data for this table are in Appendix A, page 24.

TABLE V. PERCENT DISTRIBUTION BY DRAFT CLASSIFICATION OF FIRST AND SECOND YEAR MALE FULL AND PART TIME SCIENCE GRADUATE STUDENTS WHOSE PRINCIPAL SUPPORT IS DERIVED FROM RESEARCH AS REPORTED BY 1237 PH.D. GRANTING SCIENCE DEPARTMENTS, BY DISCIPLINE, FALL 1968

| SCIENTIFIC DISCIPLINE | MATHEMATICAL SCIENCES | | PHYSICS & ASTRONOMY | | GEOSCIENCES | | CHEMISTRY | | BIOCHEMISTRY | | BIOLOGICAL SCIENCES | | BIOMEDICAL SCIENCES[1] | | PSYCHOLOGY | | AGRICULTURAL SCIENCES[1] | | ALL DISCIPLINES COMBINED | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Depts Surveyed | 196 | | 192 | | 130 | | 174 | | 114 | | 705 | | 359 | | 201 | | 219 | | 2,290 | |
| No. of Depts Reporting | 117 | | 108 | | 85 | | 122 | | 70 | | 306 | | 206 | | 101 | | 122 | | 1,237 | |
| Percent Reporting | 60.0 | | 56.4 | | 65.4 | | 70.1 | | 62.0 | | 42.0 | | 57.4 | | 50.2 | | 56.0 | | 54.0 | |
| Number of Students Whose Draft Classification is Reported | | | | | | | | | | | | | | | | | | | | |
| First Year | 176 | | 152 | | 150 | | 375 | | 151 | | 499 | | 198 | | 365 | | 596 | | 2,662 | |
| Second Year | 267 | | 347 | | 176 | | 690 | | 152 | | 599 | | 288 | | 331 | | 735 | | 3,585 | |
| TOTAL | 443 | | 499 | | 326 | | 1,065 | | 303 | | 1,098 | | 486 | | 696 | | 1,331 | | 6,247 | |
| Year | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| I-A (Draftable) | 41 | 28 | 33 | 29 | 19 | 16 | 28 | 25 | 30 | 23 | 21 | 21 | 25 | 17 | 32 | 21 | 17 | 14 | 25.3 | 21.0 |
| II-S (Student) | 5 | 26 | 5 | 24 | 11 | 27 | 8 | 19 | 12 | 30 | 10 | 20 | 18 | 27 | 9 | 26 | 10 | 17 | 9.7 | 22.0 |
| I-D (Reserve) | 6 | 5 | 4 | 3 | 6 | 2 | 6 | 4 | 7 | 3 | 6 | 4 | 6 | 5 | 10 | 4 | 9 | 8 | 7.2 | 4.7 |
| II-A (Occupation) | 4 | 3 | 9 | 4 | 3 | 1 | 7 | 6.5 | 1 | 5 | 2 | 1 | 3.5 | 2.5 | 3 | 5 | 2 | 1 | 3.4 | 3.2 |
| III-A (Fatherhood, Hardship) | 7 | 9 | 4 | 4 | 7 | 9 | 8 | 12 | 5 | 10.5 | 13 | 11 | 10 | 13 | 10 | 10 | 10 | 13 | 9.3 | 10.8 |
| I-Y, IV-F (Not qualified) | 12 | 9 | 14 | 11 | 15 | 11 | 17 | 9 | 13 | 7 | 15 | 12 | 12 | 10 | 18 | 15 | 11 | 7 | 14.3 | 10.0 |
| IV-A (Veteran) | 9 | 4 | 4 | 5 | 9 | 11 | 3.5 | 4 | 5 | 5 | 11 | 11 | 10 | 10 | 9 | 12 | 10 | 9 | 8.4 | 8.1 |
| Foreign National | 11 | 8 | 19 | 17 | 23 | 18 | 16.5 | 15 | 24 | 14 | 16.5 | 13 | 8 | 7.5 | 5 | 4 | 24 | 23 | 16.6 | 14.4 |
| Other[2] | 5 | 8 | 8 | 4 | 6 | 5 | 7 | 5 | 3 | 3 | 6 | 8 | 8 | 7 | 5 | 4 | 6 | 8 | 5.9 | 6.0 |

(Totals may not add to 100% because of rounding)

1. See TABLE VI for fields included.
2. Includes I-A over age 26, I-C, II-C, IV-C and V-A. See Appendix C for detailed definitions.

Graduate research fellows and assistants are important to the fundamental research programs of graduate departments. This is especially true in the sciences. As shown in Table V, 25% of first year and 21% of second year full or part time male graduate students whose principal support is derived from research in the 1,237 science departments reporting are classified I-A.[1] An additional 10% of first year and 22% of second year students are in II-S. A higher percentage of draft liable research students is reported among second year students (43%) than among first year students (35%). The preponderance of research assistants who are second year students, as contrasted with teaching assistants where the majority reported are first year students, makes the draft liability of this group of special concern, particularly since the second year students, being a year older, have top priority within the order of call.

Foreign nationals constitute 17% of the first year and 14% of the second year male graduate students employed as researchers in the reporting departments. When foreign students are removed from the total number, 27% of the remaining U. S. students are in I-A and 20% in II-S, for a maximum draft liability of 47% of the U. S. graduate students.

While occupational deferment is not specifically prohibited to full time students employed in research, the overall percentage of full and part time students employed to do research who are in II-A classification is only 3% in each of the years.

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1 Numerical data for this table are in Appendix A, page 25.

TABLE VI. FULL TIME ENROLLMENT OF FIRST AND SECOND YEAR GRADUATE STUDENTS REPORTED BY 1,237 PH.D. GRANTING DEPARTMENTS IN SCIENCE BY SEX AND YEAR, FALL 1968

| | No. of Ph.D. Granting Depts. Surveyed | No. of Depts. Rpting. | Percent of Depts. Rpting. | FULL TIME ENROLLMENT | | | | | | | | | Percent Female |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Male | | | Female | | | Male & Female | | | |
| | | | | 1st yr | 2nd yr | Total | 1st yr | 2nd yr | Total | 1st yr | 2nd yr | Total | |
| Mathematical Sciences | 196 | 117 | 60.0 | 1,688 | 1,551 | 3,239 | 492 | 278 | 770 | 2,180 | 1,829 | 4,009 | 5.2 |
| Physics | 192 | 108 | 56.4 | 1,552 | 1,294 | 2,846 | 119 | 68 | 187 | 1,671 | 1,362 | 3,033 | 1.8 |
| Geosciences | 130 | 85 | 65.4 | 787 | 868 | 1,655 | 86 | 53 | 139 | 873 | 921 | 1,794 | 7.75 |
| Chemistry | 174 | 122 | 70.1 | 2,041 | 1,778 | 3,819 | 413 | 310 | 723 | 2,454 | 2,088 | 4,542 | 15.9 |
| Biochemistry | 114 | 70 | 62.0 | 351 | 350 | 701 | 151 | 113 | 264 | 502 | 463 | 965 | 27.4 |
| Biological Sciences | 705 | 306 | 42.0 | 1,774 | 1,878 | 3,652 | 729 | 522 | 1,251 | 2,503 | 2,400 | 4,903 | 25.6 |
| Pathology | 78 | 21 | 28.0 | 47 | 36 | 83 | 28 | 11 | 39 | 75 | 47 | 122 | 32.0 |
| Microbiology | 84 | 64 | 76.0 | 224 | 245 | 469 | 154 | 109 | 263 | 378 | 354 | 732 | 35.8 |
| Physiology | 98 | 64 | 65.0 | 212 | 297 | 509 | 92 | 78 | 170 | 304 | 375 | 679 | 25.0 |
| Pharmacology | 99 | 57 | 58.0 | 132 | 125 | 257 | 37 | 30 | 67 | 169 | 155 | 324 | 20.6 |
| Psychology | 201 | 101 | 50.2 | 1,483 | 1,321 | 2,804 | 855 | 563 | 1,418 | 2,338 | 1,884 | 4,222 | 33.5 |
| Agronomy | 70 | 34 | 49.0 | 283 | 415 | 698 | 13 | 21 | 34 | 296 | 436 | 732 | 4.1 |
| Animal & Dairy Science | 46 | 30 | 65.0 | 190 | 262 | 452 | 20 | 18 | 38 | 210 | 280 | 490 | 7.8 |
| Agricultural Economics | 15 | 6 | 40.0 | 97 | 83 | 180 | 3 | 5 | 8 | 100 | 88 | 188 | 4.2 |
| Agricultural Engineering | 52 | 34 | 65.0 | 104 | 145 | 249 | 1 | 0 | 1 | 105 | 145 | 250 | .4 |
| Range Management | 14 | 8 | 57.0 | 22 | 29 | 51 | 0 | 0 | 0 | 22 | 29 | 51 | 0.0 |
| Forestry | 22 | 10 | 45.0 | 162 | 141 | 303 | 8 | 7 | 15 | 170 | 148 | 318 | 4.7 |
| TOTAL | 2,290 | 1,237 | 54.0 | 11,149 | 10,818 | 21,967 | 3,201 | 2,186 | 5,387 | 14,350 | 13,004 | 27,354 | 19.7 |

Table VI lists reported full time first and second year graduate enrollment by sex and discipline in 1,237 Ph.D. granting science departments. The total number of male first and second year students is larger than the numbers used in reporting draft status, because these numbers include enrolled males for whom draft classifications were not known. Enrollment figures in the biomedical and agricultural sciences are reported by individual fields.

The percentage of females in the combined first and second year classes ranges from zero in range management to 39% in microbiology Fields reporting less than 6% women are mathematics, physics, agronomy, agricultural economics, agricultural engineering, forestry, and range management. Psychology, microbiology and pathology each report more than 30% of the total enrollment in the first two years as female.

## Discussion of the Survey

Any realistic assessment of the short range effect of present draft policy on our nation's graduate schools; or long range effect on the nation's supply of newly trained professional manpower requires information on the draft classification of students enrolled in their first or second year of graduate school. This survey was conducted in an effort to determine this information for the fall of 1968.

In the spring of 1967, the National Security Council ruled that deferments need not be provided for first or second year graduate students except for those in the medical fields who are deferred by law. Following this ruling, many educators and others expressed concern that, as a result of this policy, the nation's graduate schools would suffer serious decreases in enrollment by the fall of 1968. Although comprehensive information is not yet available on present full time graduate enrollment, there appears to be no substantial enrollment drop from that of the fall of 1967.

### Fall Enrollment, 1968

Several factors may be cited as contributing to a higher than anticipated graduate enrollment this fall. Among these were low draft calls through the summer of 1968, a cutback in the number of military physical examinations ordered during the summer months, a relatively slow reclassification process for many June graduates and a sizeable fraction of the students who were in their first year of graduate studylast year, and a substantial enrollment in the fall of 1968 of men who were draft liable.

A number of reasons may be given as to why draft-eligible men enrolled for the fall term. Many,no doubt, simply followed their long-term educational goals by beginning or continuing their graduate study in an effort to progress as far as possible toward their graduate degrees before being

ordered for induction. Some believed that they had been assured of an opportunity to finish at least the school term they had started if issued an induction order.

An additional factor for enrollment in spite of draft liability, especially among science students, may have been an important decision made by Federal agencies which grant graduate fellowships, traineeships, and scholarships. These agencies ruled that men who began their graduate study under such awards would not forfeit their awards if their training were interrupted by military service. Graduate students who did not accept such awards for immediate tenure would forfeit.

Summary tables of the draft status (Tables I and III) of students in this survey have been calculated for all male first and second year students combined, and again (by removing the draft exempt foreign nationals from the totals) for all U. S. students whose draft status was reported. While these percentages cannot be assumed to represent any given proportion of all of the male first or second year students enrolled for advanced degrees in science (Table I), or of those employed in teaching or research (Table III), the relatively large numbers of students whose draft classifications were reported allows these percentages to be used in estimating the proportion of draft liable graduate students in these fields of science; and the proportion of the students who are foreign nationals.

Although the actual full time graduate school enrollment in the fall of 1968 does not appear to have dropped substantially from the fall of 1967, information was obtained from science departments that may be useful in discerning the effect of the draft on 1968 fall enrollment. Departments were asked to report the number of students who had accepted enrollment for the fall term, but did not actually enroll, and the reason, if known, for non-enrollment.

Departments also were asked whether this year's actual enrollment was above or below that which might have been expected had there been no change from last year in draft rules or level of research support.

Of more than 4,000 first or second year male students reported as having failed to enroll, about one fourth were known to have entered military service, and about one out of ten was known to have entered full time employment. Department chairmen did not know or did not state the reasons for non-enrollment of about half of the total.

It is important to note that of the non-enrollees reported to have entered military service, many were volunteers. The Department of Defense had expected about 100,000 college graduates to enter service on a voluntary basis during Fiscal 1969 - some in officer programs, some enlisting in preferred branches of service, and some enlisting in order to choose a preferred time for service entry.

Among department chairmen who offered an opinion as to whether their fall enrollment was above or below that which they might have expected had there been no change in draft rules or research support from last year, about 5% felt their enrollment was above expectation; 60% felt it was lower (with most of these indicating a drop of less than 25%);while about 35% reported that enrollment was about what they would normally have expected.

Among those indicating a decrease in expected enrollment, about 80% believed that both loss of research support and changed draft rules had caused the drop in approximately equal measure; and most of the remainder felt that the draft was the major reason for the decrease.

Teaching and Research Fellows and Assistants

For many universities, the problem of providing teaching services to undergraduate students may be serious by the beginning of the spring term,

since 31% of the first and second year reported male graduate students employed to teach already are in I-A and subject to induction, plus an additional 13% still awaiting reclassification from last year's student deferment (II-S) in the early weeks of the fall semester. Unless changes are made in current draft regulations, 44% of the first and second year teaching students are potentially liable to the draft. Among the U.S. students who are teaching, half are in I-A or last year's II-S classification.

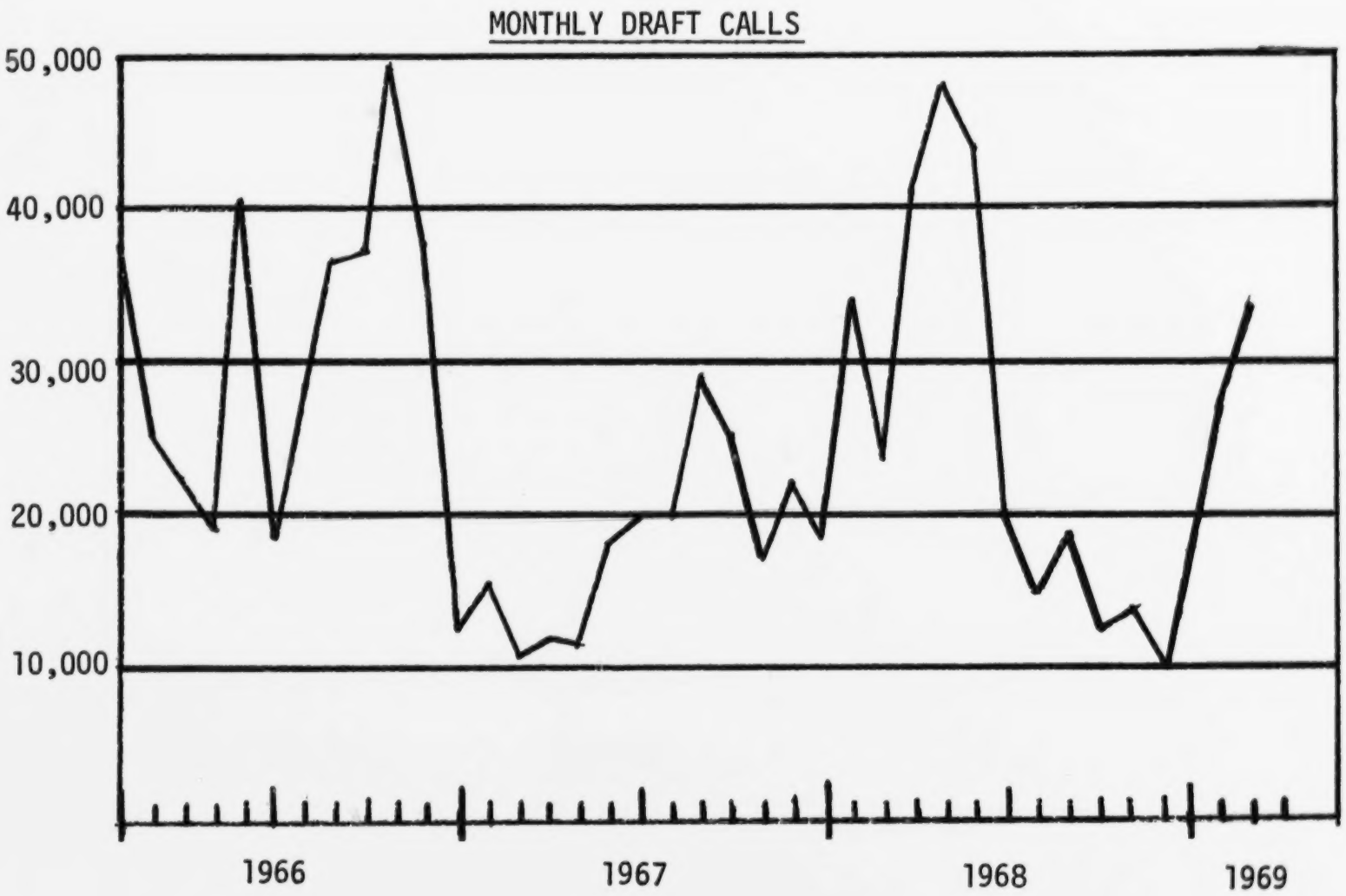
Many respondents in this survey reported moderate to severe problems created by cuts in research support during 1968. The loss to the draft of students already engaged in research projects will have an additional adverse impact on research programs already in progress in science departments. Forty percent of the 6,247 first and second year students reported as employed in research are potentially liable to induction. Forty seven percent of the U.S. students in their first two years of graduate study who are employed to do research are draft liable.

Size and Potential Effect of the Draft Calls in Coming Months

There is no way to predict accurately how many of the first and second year graduate students who are liable to induction will be called to service before the end of the first quarter or semester, the second quarter, or the spring term. Since current regulations require that each local board fill its draft call each month with the oldest available men in the combined age group 19 through 25, inductions are likely to be high among draft liable graduate students. Few non-college men are available in the age group 22 through 25 where most of these graduate students fall.

The Department of Defense originally estimated a total draft call of 240,000 for Fiscal 1969, and has recently added 15,000 to that

estimate for replacement of the reservists called to duty in early 1968 and scheduled for early release. Between June and December of 1968, draft calls totalled 86,800, leaving about 168,000 to be drafted between January and June of 1969. The January call of 26,800 and the February call of 33,700 signal the start of the high segment of the normal replaceability cycle of 18 months, which also indicates high monthly calls in the summer and fall months of 1969.




It appears that a substantial proportion of draft liable graduate students in science as well as their fellow graduate students in other disciplines will be ordered into service in the months ahead unless the order of call is changed, or deferment is provided to allow graduate students to complete their degrees. Although many may be allowed to complete this

school year if an induction notice is not issued before they are in the final term of the year, this does not change the fact that most of these draft eligible men may be unable to complete their graduate training (and almost certainly their Ph.D. training) prior to entry into the service. A substantial loss of current first and second year graduate students inevitably will reduce the size of advanced Ph.D. candidate classes next year and in the two years following; and lead to a serious reduction in new Ph.D. trained professionals available to serve the nation's needs during the early 1970's.

TABLE II-A. DISTRIBUTION BY DRAFT CLASSIFICATION OF FIRST AND SECOND YEAR MALE FULL TIME GRADUATE STUDENTS ENROLLED IN 1237 PH.D. GRANTING DEPARTMENTS REPORTING, BY SCIENTIFIC DISCIPLINE, FALL 1968

| SCIENTIFIC DISCIPLINE | MATHEMATICAL SCIENCES | | PHYSICS & ASTRONOMY | | GEOSCIENCES | | CHEMISTRY | | BIOCHEMISTRY | | BIOLOGICAL SCIENCES | | BIOMEDICAL[1] SCIENCES | | PSYCHOLOGY | | AGRICULTURAL[1] SCIENCES | | ALL DISCIPLINES COMBINED | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Depts. Surveyed | 196 | | 192 | | 130 | | 174 | | 114 | | 705 | | 359 | | 201 | | 219 | | 2,290 | |
| No. of Depts. Reporting | 117 | | 108 | | 85 | | 122 | | 70 | | 306 | | 206 | | 101 | | 122 | | 1,237 | |
| Percent Reporting | 60.0 | | 56.4 | | 64.5 | | 70.1 | | 61.4 | | 42.0 | | 57.4 | | 50.2 | | 56.0 | | 54.0 | |
| Number of Students Whose Draft Classification is Reported | | | | | | | | | | | | | | | | | | | | |
| First Year | 1,328 | | 1,497 | | 696 | | 2,029 | | 351 | | 1,535 | | 591 | | 1,392 | | 988 | | 10,407 | |
| Second Year | 1,152 | | 1,138 | | 670 | | 1,773 | | 350 | | 1,485 | | 636 | | 1,252 | | 1,184 | | 9,640 | |
| TOTAL | 2,480 | | 2,635 | | 1,366 | | 3,802 | | 701 | | 3,020 | | 1,227 | | 2,644 | | 2,172 | | 20,047 | |
| Year | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd |
| I-A (Draftable) | 359 | 266 | 485 | 287 | 152 | 135 | 603 | 440 | 82 | 61 | 362 | 291 | 124 | 126 | 391 | 291 | 135 | 135 | 2,693 | 2,032 |
| II-S (Student) | 97 | 218 | 102 | 196 | 60 | 136 | 180 | 329 | 43 | 113 | 176 | 322 | 118 | 151 | 152 | 296 | 87 | 164 | 1,026 | 1,925 |
| I-D (Reserve) | 83 | 45 | 51 | 37 | 43 | 37 | 114 | 79 | 21 | 12 | 102 | 62 | 25 | 33 | 105 | 60 | 81 | 84 | 625 | 449 |
| II-A (Occupation) | 69 | 61 | 213 | 101 | 17 | 11 | 140 | 116 | 8 | 12 | 41 | 30 | 17 | 21 | 38 | 35 | 11 | 15 | 554 | 408 |
| III-A (Fatherhood, Hardship) | 87 | 96 | 45 | 54 | 38 | 47 | 122 | 177 | 17 | 35 | 142 | 167 | 54 | 76 | 106 | 98 | 93 | 138 | 704 | 888 |
| I-Y, IV-F (Not qualified) | 191 | 139 | 196 | 132 | 102 | 59 | 264 | 180 | 54 | 33 | 244 | 177 | 84 | 71 | 291 | 190 | 101 | 77 | 1,527 | 1,058 |
| IV-A (Veteran) | 83 | 45 | 58 | 45 | 61 | 83 | 95 | 59 | 21 | 9 | 146 | 128 | 49 | 57 | 146 | 159 | 111 | 110 | 770 | 695 |
| Foreign National | 267 | 187 | 235 | 206 | 163 | 111 | 356 | 252 | 67 | 46 | 209 | 210 | 77 | 61 | 60 | 48 | 306 | 397 | 1,740 | 1,518 |
| Other[2] | 92 | 95 | 112 | 80 | 60 | 51 | 155 | 141 | 27 | 23 | 113 | 98 | 43 | 40 | 103 | 75 | 63 | 64 | 768 | 667 |

1. See TABLE VI for fields included.

2. Includes I-A over age 26, I-C, II-C, IV-C and V-A. See Appendix C for detailed definitions.

TABLE IV-A. DISTRIBUTION BY DRAFT CLASSIFICATION OF FIRST AND SECOND YEAR MALE FULL AND PART TIME SCIENCE GRADUATE STUDENTS WHOSE PRINCIPAL SUPPORT IS DERIVED FROM TEACHING AS REPORTED BY 1237 PH.D. GRANTING SCIENCE DEPARTMENTS, BY DISCIPLINE, FALL 1968

| SCIENTIFIC DISCIPLINE | MATHEMATICAL SCIENCES | | PHYSICS & ASTRONOMY | | GEOSCIENCES | | CHEMISTRY | | BIOCHEMISTRY | | BIOLOGICAL SCIENCES | | BIOMEDICAL[1] SCIENCES | | PSYCHOLOGY | | AGRICULTURAL[1] SCIENCES | | ALL DISCIPLINES COMBINED | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Depts. Surveyed | 196 | | 192 | | 130 | | 174 | | 114 | | 705 | | 359 | | 201 | | 219 | | 2,290 | |
| No. of Depts. Reporting | 117 | | 108 | | 85 | | 122 | | 70 | | 306 | | 206 | | 101 | | 122 | | 1,237 | |
| Percent Reporting | 60.0 | | 56.4 | | 65.4 | | 70.1 | | 61.4 | | 42.0 | | 57.4 | | 50.2 | | 56.0 | | 54.0 | |
| Number of Students Whose Draft Classification is Reported | | | | | | | | | | | | | | | | | | | | |
| First Year | 595 | | 781 | | 211 | | 1,455 | | 62 | | 439 | | 126 | | 287 | | 59 | | 4,015 | |
| Second Year | 578 | | 592 | | 227 | | 892 | | 66 | | 442 | | 165 | | 297 | | 91 | | 3,350 | |
| TOTAL | 1,173 | | 1,373 | | 438 | | 2,347 | | 128 | | 881 | | 291 | | 584 | | 150 | | 7,365 | |
| Year | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd |
| I-A (Draftable) | 195 | 146 | 268 | 186 | 64 | 71 | 503 | 273 | 20 | 11 | 133 | 100 | 30 | 36 | 81 | 89 | 8 | 16 | 1,302 | 928 |
| II-S (Student) | 45 | 88 | 60 | 78 | 12 | 43 | 134 | 140 | 9 | 16 | 52 | 89 | 23 | 40 | 25 | 58 | 8 | 11 | 368 | 563 |
| I-D (Reserve) | 36 | 17 | 22 | 14 | 10 | 10 | 73 | 34 | 2 | 3 | 24 | 21 | 7 | 7 | 20 | 20 | 8 | 11 | 202 | 137 |
| II-A (Occupation) | 44 | 47 | 91 | 64 | 6 | 3 | 129 | 107 | 0 | 6 | 20 | 16 | 7 | 7 | 11 | 8 | 3 | 2 | 311 | 260 |
| III-A (Fatherhood, Hardship) | 26 | 47 | 27 | 26 | 15 | 19 | 71 | 64 | 4 | 4 | 35 | 55 | 6 | 20 | 19 | 20 | 10 | 15 | 213 | 270 |
| I-Y, IV-F (Not qualified) | 101 | 69 | 113 | 63 | 41 | 21 | 193 | 88 | 3 | 9 | 86 | 56 | 21 | 19 | 63 | 38 | 7 | 12 | 628 | 375 |
| IV-A (Veteran) | 30 | 34 | 34 | 27 | 17 | 32 | 54 | 31 | 5 | 5 | 30 | 43 | 10 | 15 | 36 | 29 | 6 | 12 | 222 | 228 |
| Foreign National | 89 | 99 | 136 | 104 | 39 | 18 | 222 | 115 | 15 | 7 | 36 | 33 | 20 | 15 | 12 | 15 | 7 | 10 | 576 | 416 |
| Other[2] | 29 | 31 | 30 | 30 | 7 | 10 | 76 | 40 | 4 | 5 | 23 | 29 | 2 | 6 | 20 | 20 | 2 | 2 | 193 | 173 |

1. See TABLE VI for fields included in each discipline.
2. Includes I-A over age 26, I-C, II-C, IV-C and V-A. See Appendix C for detailed definitions.

TABLE V-A. DISTRIBUTION BY DRAFT CLASSIFICATION OF FIRST AND SECOND YEAR MALE FULL AND PART TIME SCIENCE GRADUATE STUDENTS WHOSE PRINCIPAL SUPPORT IS DERIVED FROM RESEARCH AS REPORTED BY 1237 PH.D. GRANTING SCIENCE DEPARTMENTS, BY DISCIPLINE, FALL 1968

| SCIENTIFIC DISCIPLINE | MATHEMATICAL SCIENCES | PHYSICS & ASTRONOMY | GEOSCIENCES | CHEMISTRY | BIOCHEMISTRY | BIOLOGICAL SCIENCES | BIOMEDICAL SCIENCES[1] | PSYCHOLOGY | AGRICULTURAL SCIENCES[1] | ALL DISCIPLINES COMBINED |
|---|---|---|---|---|---|---|---|---|---|---|
| No. of Depts. Surveyed | 196 | 192 | 130 | 174 | 114 | 705 | 359 | 201 | 219 | 2,290 |
| No. of Depts. Reporting | 117 | 108 | 85 | 122 | 70 | 306 | 206 | 101 | 122 | 1,237 |
| Percent Reporting | 60.0 | 56.4 | 65.4 | 70.1 | 61.4 | 42.0 | 57.4 | 50.2 | 56.0 | 54.0 |
| Number of Students Whose Draft Classification is Reported | | | | | | | | | | |
| First Year | 176 | 152 | 150 | 375 | 151 | 499 | 198 | 365 | 596 | 2,662 |
| Second Year | 267 | 347 | 176 | 690 | 152 | 599 | 288 | 331 | 735 | 3,585 |
| TOTAL | 443 | 499 | 326 | 1,065 | 303 | 1,098 | 486 | 696 | 1,331 | 6,247 |

| Year | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I-A (Draftable) | 73 | 76 | 50 | 101 | 29 | 28 | 106 | 172 | 45 | 35 | 105 | 120 | 50 | 50 | 117 | 69 | 103 | 102 | 678 | 753 |
| II-S (Student) | 8 | 70 | 8 | 83 | 16 | 47 | 30 | 130 | 18 | 46 | 48 | 122 | 36 | 77 | 32 | 86 | 61 | 127 | 257 | 788 |
| I-D (Reserve) | 11 | 13 | 6 | 11 | 9 | 4 | 21 | 29 | 11 | 4 | 31 | 24 | 12 | 14 | 35 | 12 | 56 | 56 | 192 | 167 |
| II-A (Occupation) | 7 | 7 | 13 | 13 | 5 | 1 | 25 | 45 | 2 | 8 | 10 | 5 | 7 | 7 | 10 | 16 | 11 | 6 | 90 | 108 |
| III-A (Fatherhood, Hardship) | 12 | 24 | 6 | 13 | 11 | 16 | 29 | 83 | 7 | 16 | 63 | 68 | 20 | 38 | 37 | 33 | 61 | 95 | 246 | 386 |
| I-Y, IV-F (Not qualified) | 22 | 24 | 22 | 37 | 23 | 20 | 63 | 65 | 20 | 10 | 75 | 73 | 24 | 30 | 66 | 49 | 65 | 53 | 380 | 361 |
| IV-A (Veteran) | 15 | 11 | 6 | 18 | 13 | 20 | 13 | 26 | 7 | 8 | 57 | 68 | 19 | 30 | 34 | 41 | 59 | 69 | 223 | 291 |
| Foreign National | 19 | 22 | 29 | 58 | 35 | 31 | 62 | 105 | 36 | 21 | 82 | 75 | 15 | 22 | 17 | 12 | 145 | 171 | 440 | 517 |
| Other[2] | 9 | 20 | 12 | 13 | 9 | 9 | 26 | 35 | 5 | 4 | 28 | 44 | 15 | 20 | 17 | 13 | 35 | 56 | 156 | 214 |

1. See TABLE VI for fields included in each discipline.
2. Includes I-A over age 26, I-C, II-C, IV-C and V-A. See Appendix C for detailed definitions.

# APPENDIX B

## Definitions Used in the Survey

First Year - Student who entered full time graduate study between January and October, 1968; or entered part time study earlier, but has not completed the equivalent of one school year.

Second Year - Student who has completed more than one, but less than two years of graduate work.

Full Time - A bona fide graduate student who is engaged entirely in training activities in a graduate department. These activities may embrace any appropriate combination of study, teaching and research.

Part Time - Any other enrolled graduate student working toward a degree in a graduate department.

Teaching Assistant - Any graduate student (full or part time) who teaches or supervises one or more classes or laboratory sections.

## Coverage of the Survey

The determination of graduate science departments to be queried for this survey was made by each participating scientific society using its own resources. The intimate relationship between the scientific societies and academic science departments virtually assures that all graduate departments granting Ph.D.'s in the several scientific disciplines and most graduate departments granting only a masters degree were reached.

Responses were tabulated separately for Ph.D. granting departments and those offering masters degrees only. Since the percentage of responses from the master's degree level departments was low, and because the returns received from these departments indicated no substantial differences from the data received from the Ph.D. granting departments, only data from the latter are used in this report.

# APPENDIX C

## Selective Service Classifications

### CLASS I

Class I-A: Available for military service.

Class I-A-O: Conscientious objector available for noncombatant military service only.

Class I-C: Member of the Armed Forces of the United States, the Environmental Science Services Administration, or the Public Health Service.

Class I-D: Member of reserve component or student taking military training.

Class I-O: Conscientious objector available for civilian work contributing to the maintenance of the national health, safety or interest.

Class I-S: Student deferred by statute.

Class I-W: Conscientious objector performing civilian work contributing to the maintenance of the national health, safety or interest.

Class I-Y: Registrant not eligible for a lower class who would be qualified for military service in time of war or national emergency.

### CLASS II

Class II-A: Registrant deferred because of civilian occupation (except agriculture and activity in study).

Class II-C: Registrant deferred because of agricultural occupation.

Class II-S: Registrant deferred because of activity in study.

### CLASS III

Class III-A: Registrant with a child or children; and registrant deferred by reason of extreme hardship to dependents.

### CLASS IV

Class IV-A: Registrant who has completed service; sole surviving son.

Class IV-B: Officials deferred by law.

Class IV-C: Aliens.

Class IV-D: Minister of religion or divinity student.

Class IV-F: Registrant not qualified for any military service.

### CLASS V

Class V-A: Registrant over the age of liability for military service.

## Order of Consideration of Classes

Every registrant shall be placed in Class I-A except that when grounds are established to place a registrant in one or more of the classes listed in the following table, the registrant shall be classified in the lowest class for which he is determined to be eligible, with Class I-A-O considered the highest class and Class I-C considered the lowest class according to the following table:

| Class: | | Class: | |
|---|---|---|---|
| | I-A-O | | IV-B |
| | I-O | | IV-C |
| | I-S | | IV-D |
| | I-Y | | IV-F |
| | II-A | | IV-A |
| | II-C | | V-A |
| | II-S | | I-W |
| | I-D | | I-C |
| | III-A | | |

## Order of Call within Class I-A, I-A-O and I-O

1. Selective Service Delinquents, age 19 or over; oldest first.
2. Volunteers under 26 in the order in which they volunteered.
3. Single non-volunteers and men married after August 26, 1965, age 19 to 26, oldest first.
4. Non-fathers, married on or before August 26, 1965, age 19 to 26, oldest first.
5. Non-volunteers 26 to 35, youngest first.
6. Non-volunteers between 18 1/2 and 19, oldest first.

The Scientific Manpower Commission is a private, non-profit corporation organized by its constituent scientific societies* in 1953 to serve as a focus for consideration of manpower concerns common to all scientific disciplines. Its charter reflects broad interest in the recruitment, training and utilization of scientific personnel.

The Commission is greatly concerned that current provisions of the Selective Service law and its implementing regulations will seriously and detrimentally affect the nation's long range supply of trained personnel, its ability to support its defense and its civilian economy, and the integrity of the educational processes through which its resources of highly trained personnel are produced. It believes that the findings in this report clearly indicate the probability of serious disruptions in normal professional education programs as well as the withdrawal of substantial numbers of trained persons from the economy.

The Commission believes that national policy should rest on the principle that deferment of any individual be based on a consideration of national interest. In the case of stepped up mobilization, and especially in the case of prolonged conflict, it believes that the national security and viability require recognition and provision for the nation's continuing needs for educated personnel, including their training and proper utilization.

The Commission sees an urgent and pressing need to develop long range national policy relating to military manpower procurement which gives due consideration to the continuing requirements of the nation for highly trained personnel.

**American Association for the Advancement of Science**
**American Astronomical Society**
**American Chemical Society**
**American Geological Institute**
**American Institute of Biological Sciences**
**American Institute of Chemists**
**American Institute of Physics**
**American Psychological Association**
**Conference Board of the Mathematical Sciences**
**Federation of American Societies for Experimental Biology**
**Policy Committee for Scientific Agricultural Societies**